IPIN 2023
THIRTEENTH INTERNATIONAL CONFERENCE ON
INDOOR POSITIONING
AND INDOOR NAVIGATION
25th-28th Sep. 2023, Nuremberg Germany

Special Session

"Localization and tracking for high-performance sport analysis"

Abstract
The community of indoor positioning research has identified the need for adapted systems to the localization and tracking for high-performance sport analysis. At this pre-Olympic year, this topic presents several specific challenges. The position, the velocity and the trajectory of the players have become essential data in order to assess the athletes work load and to make strategic analysis. These data are still not widely measured by current systems, especially at indoors and outside the high-level sports competitions.

Important aspects are the challenges related to the indoor localization and tracking in high-performance sport due to a wide variety of trajectories (linear path for a runner and more complex path for basketball player), several accelerations (stop and go), changes of directions, jumps and players shadowing in team sport. All these specificities require tracking and localization systems with a high accuracy, good synchronization and high-rate data acquisition according to the players velocity.

The goal of this Special Session is to promote and foster the dialogue of the Indoor Positioning community over the topics of high-performance sport analysis. To address this, the proposed special session focuses on the application of positioning measurements to athletes tracking and the assessment of the capabilities of existing technologies.

In this Special Session, we invite authors to submit papers with a strong positioning and tracking component related (<u>but not limited</u>) to:

- High-accuracy athletes positioning
- High-rate data acquisition for positioning and tracking
- Joint time synchronization and localization
- Accurate trajectory reconstruction
- Athletes' velocity and acceleration mapping
- Athletes' computer vision-based tracking
- Simultaneous and multiple localization for team sports
- Benchmarking, assessment, evaluation of technologies
- Guidance for visual impairments in sport practice

Keywords
Athletes high-accuracy localization and high-rate data acquisition, joint time synchronization and localization, trajectory reconstruction, data mapping, multiple localization.

Organizers

- Elizabeth Colin (co-organizer)
- Laurie Conteville (co-organizer)
- Sergio Fortes (co-organizer)

Suggested Reviewers:

- Faten Chakchouk

Important Dates

- Submission deadline: 15 May 2023
- Notification of acceptance: 21 June 2023

Manuscripts are submitted according to the IPIN 2023 Conference instructions for authors. Papers undergo a single-blind review process by at least two reviewers. Accepted regular papers are submitted to IEEE Xplore Digital Library, accepted WiP papers to CEUR-WS.org, which is currently indexed by Scopus, Ei Compendex and DBLP.

Submit your paper now in *https://softconf.com/n/ipin2023/*

If you have any further questions, please contact Elizabeth Colin or Laurie Conteville (elizabeth.colin@efrei.fr, laurie.conteville@efrei.fr)